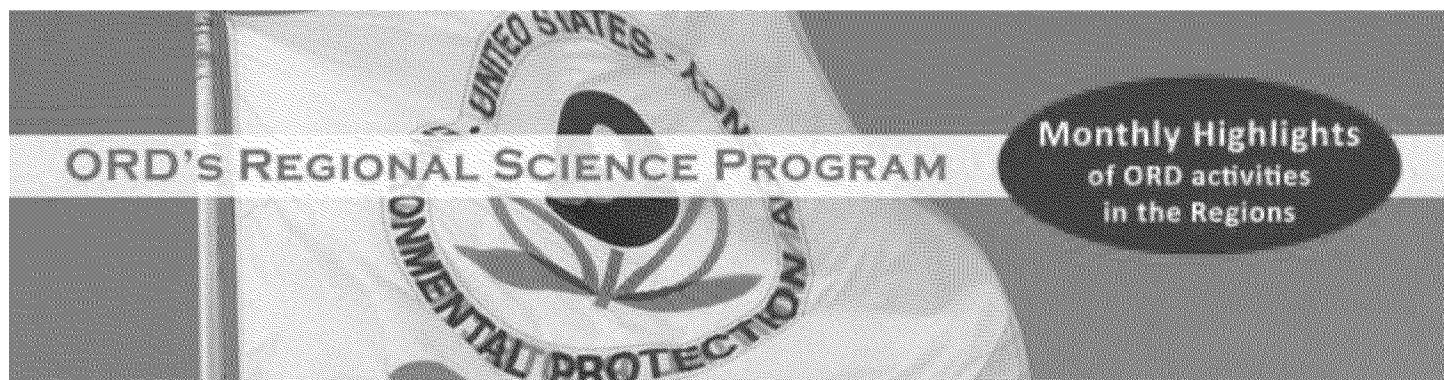


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Sent: Tue 10/13/2015 3:47:56 PM

Subject: Regional Science Program Highlights Report - October 2015



October 2015

ORD's Regional Science Program (RSP), managed by the Office of Science Policy, links ORD science with EPA's regional offices. The program is implemented by Headquarters staff and 20 regional scientists and engineers, known as the Regional Science Liaisons (RSLs) and the Superfund and Technology Liaisons (STLs). RSP staff build networks and partnerships between regional and ORD scientists, provide technical assistance, and deliver research results on high-priority regional science issues. For more information, go to <http://intranet.ord.epa.gov/science/regional-science>.

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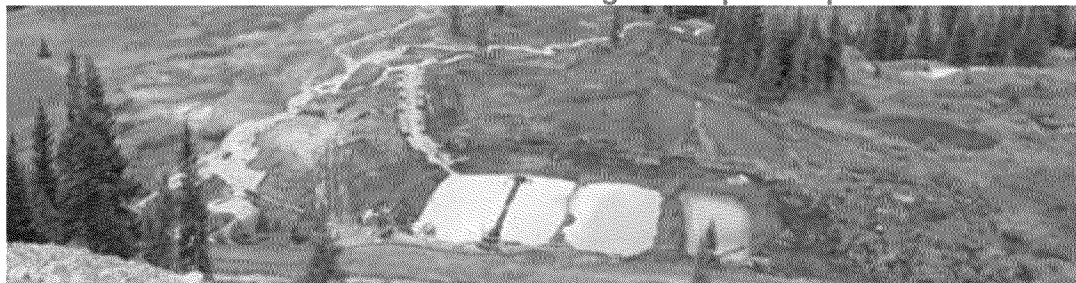
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Regional Science Highlights

Gold King Mine Spill Response



• The Region 6 STL, Terry Burton, recently served as the Planning Section Chief for the Incident Command Post for the Gold King Mine response providing strategic advice for current and future activities related to EPA's response to the spill.

• The Region 9 STL, Mike Gill, and the Site Characterization and Monitoring Technical Support Center (SCMTSC) Director, Felicia Barnett (Region 4 STL), provided support to Region 9 in determining pre- and post-spill conditions in the San Juan River. The SCMTSC provided the Region with a statistical analysis of dissolved aluminum and iron, and total lead, arsenic and zinc data collected from New Mexico, Utah and Arizona sampling stations from August 8th-16th, along with analysis of historical data. Region 9 will use this

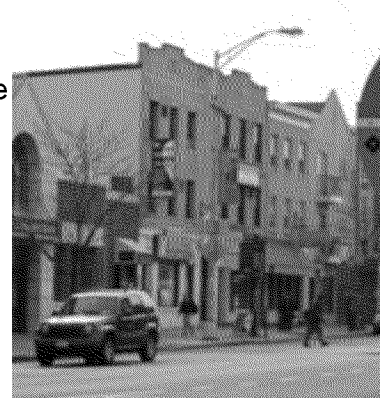
information to evaluate whether surface water concentrations have returned to pre-spill background variability levels which will assist the Navajo Nation in agricultural water use decisions. The University of Arizona is conducting an independent third party evaluation of EPA's analysis will share the results with the Navajo Nation.

- EPA scientists completed a catchment water model to evaluate groundwater and surface water flows for the Upper Animas River. This model will inform other sampling efforts, stakeholder requests, and data needs as the response effort continues. OSP's Region 8 STL, Stephen Dymant, is using the catchment water model to develop a conceptual site model of the river that will identify any existing data gaps, evaluate existing evidence, and clarify how independent data sets inform the project technical team.

For more information, contact [Terry Burton](#) (Region 6 RSL), [Mike Gill](#) (Region 9 STL), [Felicia Barnett](#) (Region 4 STL) or [Stephen Dymant](#) (Region 8 STL).

Citizen Science Air Monitoring in New Jersey

On August 13, Region 2 staff retrieved EPA's four Citizen Science Air Monitoring units from the Ironbound Community Corporation (ICC), marking the end of the community monitoring portion of this citizen science RARE project. ORD is evaluating ICC's data and will share preliminary findings with the rest of the project team in Region 2, including Marie O'Shea (Region 2 RSL). Results will be shared with the Ironbound community during an air pollution workshop tentatively scheduled for Thursday, November 12.



For more information, contact [Marie O'Shea](#) (Region 2 RSL).

In the News

- This summer, Region 5 staff served as monitors for NERL's Great Lakes Beach Study and NHEERL's Summer Interview and Saliva Health Study at Washington Beach in Michigan City, Indiana. The goals of the studies were to develop and test new rapid methods for measuring *E. Coli* and bacterial phage and to understand the types of infections people are more likely to get while swimming or at the beach. Read the story [here](#).

- ORD/NRMRL's Darren Lytle and Michael Schock are participating on a drinking water technical advisory committee to help the City of Flint, Michigan determine the best way to implement corrosion control treatment to minimize lead in its drinking water, and to maintain simultaneous compliance for other drinking water contaminants.

For more information, contact [Carole Braverman](#) (Region 5 RSL).

Meetings and Milestones

Science At Work – A Region 5 Lecture Series

Remember academic bulletin boards covered with announcements for interesting and engaging lectures? That's the model for Region 5's new occasional lecture series, "Science at Work", sponsored by the Regional Science and Technology Council and coordinated by Carole Braverman (Region 5 RSL), featuring speakers across Region 5, EPA and beyond. If you have a project you're passionate about and want to share, check out this [Skills Marketplace opportunity](#) and apply to be part of this series.

For more information, contact [Carole Braverman](#) (Region 5 RSL).

Lead in Urban Soil Workshop – September 15-16

On the heels of a USA Today investigative web-based report "[Ghost Factories](#)," the Superfund Program is evaluating the potential adverse effects from emissions at over 460 former lead processing facilities nationwide. As part of this effort, the Region 3 STL, Bill Hagel, organized a workshop for scientists from EPA, other federal agencies, and state and local governments to identify ways to economically address lead in soil in urban areas. Karen Bradham (NERL) gave a presentation on soil lead bioavailability and Aaron Betts (NRMRL) discussed lead speciation analytical techniques. Over 200 people attended the workshop.

For more information, contact [Bill Hagel](#) (Region 3 STL).

EPA's Scientific Integrity Official Visits Region 4 - September 21-22

Dr. Francesca Grifo, EPA's Scientific Integrity Official, met with the Region 4 RSL, Tom Baugh, along with Region 4 management to share EPA's scientific integrity vision and accomplishments and to discuss the importance of scientific integrity to regional programs and outreach.

For more information, contact [Tom Baugh](#) (Region 4 RSL).

Region 7 Technical Exchange – September 23

The Region 7 STL, Robert Weber, hosted a technical exchange for Region 7 hazardous waste staff, where a Region 7 Superfund Remedial Project Manager presented the use of three-dimensional software for conceptual site model development and visualization of data. The technical exchange is a periodic forum to discuss topics that are current and relevant to the Region 7 hazardous waste programs.

For more information, contact [Robert Weber](#) (Region 7 STL).

RETIGO Webinar – September 29

The Region 2 RSL, Marie O'shea, was a co-presenter at the webinar on ORD's RETIGO tool for data visualization. RETIGO was originally developed as a tool for mobile sensor users. Gayle Hagler (ORD/NRMRL) invited Marie to join the team to develop the proposal for the next phase of RETIGO development. Thanks to ORD's partnership with Region 2 on this effort, RETIGO 2.0, which was beta tested this past August, boasts several additional capabilities. RETIGO is now applicable to stationary sources and allows citizen scientists to make their data available to other users.

**For more information, contact Marie O'Shea (Region 2 RSL).
Sustainability Training in Region 2 – October 14**

The Region 2 RSL, Marie O'Shea, is on the planning committee for the upcoming half-day workshop on sustainability that ORD's Alan Hecht and Gary Foley will both be participating in. The goals of the workshop are to highlight and showcase practical ways to incorporate sustainability principles, approaches and tools into staff member's day-to-day work. The training is co-hosted with EPA's Office of Research and Development, the Office of Policy, EPA University, and Region 1.

**For more information, contact Marie O'Shea (Region 2 RSL).
ProUCL Software Training for Wisconsin Department of Natural Resources – November 4**

At Region 5's request, OSP's Site Characterization and Monitoring Technical Support Center (SCMTSC) will provide a training session on the use of the ProUCL software to the Wisconsin Department of Natural Resources at a state meeting. The Director of the SCMTSC, Felicia Barnett (Region 4 STL), and the Region 5 STL, Chuck Maurice, are coordinating with OSWER management, who is also providing training during the meeting. The ProUCL software, which computes rigorous statistics to help decision makers choose cost-effective remediation options, was developed and is managed by the SCMTSC.

**For more information, contact Felicia Barnett (Region 4 STL and Director of the SCMTSC) or Chuck Maurice (Region 5 STL).
ORD Tools Café in Region 7 - December**

The Region 7 RSL, Brenda Groskinsky, and the Region 7 STL, Robert Weber, are collaborating with ORD's Lisa Matthews to host an ORD Tools Café that will be offered as part of a Region 7 State Environmental Directors meeting. The RSL and STL have identified tools that have been used or developed in Region 7, or are currently under development. They have also consulted with ORD Technical Support Center Directors for any additional tools of interest.

**For more information, contact Brenda Groskinsky (Region 7 RSL) or Robert Weber (Region 7 STL).
ORD Activities in the Regions**

RARE: Stream Restoration Project Shows Benefits of Removing Legacy Sediments

ORD and Region 3, along with state and academic scientists, are monitoring the results of removing nearly 22,000 tons of nutrient-laden sediments from a stream bed near Lancaster, PA. Results from this FY2010 RARE project show a remarkable transformation to marshy conditions where wetland birds and plants are

thriving. Scientists estimate that the restoration project is preventing 100 tons of sediment and 230 pounds of phosphorus from entering the stream each year, helping in Pennsylvania's efforts to restore local waters and the downstream Chesapeake Bay. For more information, click [here](#).

For more information, contact [Ron Landy](#) (Region 3 RSL).

Technical Support: Using X-Ray Fluorescence to Test Soil Contamination

• [ORD Technical Support Centers Lessons Learned](#) The Region 8 STL, Stephen Dymont, is collaborating with Region 8, the Office of Superfund Remediation and Technology Innovation, and the Colorado Department of Public Health and Environment to provide technical assistance at the Colorado Smelter in Pueblo, CO. The team is testing an innovative method using a portable x-ray fluorescence (XRF) instrument for testing elevated levels of lead and arsenic in soil at nearby residential properties. If successful, this method will provide data necessary to make more confident real-time cleanup decisions.



• [ORD Technical Support Centers Lessons Learned](#) The Region 4 STL, Felicia Barnett, is assisting Region 4 with analyzing Superfund site samples to determine the precision, accuracy, and statistical reliability of XRF field screening procedures. Laboratory analysis and ex-situ XRF screenings will be conducted on each sample using the field screening procedure developed by OSWER. The goal of this study is to develop a Superfund Field Operating Guide for the XRF that will provide field decision makers with more flexibility and reliability when using the XRF at arsenic contaminated sites in Region 4 and across the country.

For more information, contact [Stephen Dymont](#) (Region 8 STL) or [Felicia Barnett](#) (Region 4 STL).

Technical Support: BF Goodrich Superfund Site

Region 4 has requested assistance from the Site Characterization and Monitoring Technical Support Center (SCMTSC) in completing the Remedial Investigation Report for the BF Goodrich Superfund Site. The BF Goodrich Superfund site, located in western Kentucky, was added to the NPL list in 1983. Hazardous substances detected in the soil and ground water are impacting the Tennessee River. Three potentially responsible parties (PRPs) have been conducting the assessment and cleanup work. Due to differing opinions among the PRPs, a consolidated remedial investigation report has not been completed. Region 4, with assistance from the SCMTSC, is now leading the development of the report, which will determine risk and remediation activities at the site.

For more information, contact [Felicia Barnett](#) (Region 4 STL) or [Bill Hagel](#) (Region 3 STL).

ORD Technical Support Centers Lessons Learned

As part of the SHC Research Action Plan for FY15, three of ORD's Technical Support Centers (TSCs) developed a lessons learned document. The Ground Water TSC, Engineering TSC, and OSP's Site Characterization and Monitoring TSC provided six case studies to exemplify and summarize the variety of approaches that contribute to fulfilling ORD's technical support mission. The document has been completed, peer reviewed, and submitted for final clearance.

For more information, contact [Felicia Barnett](#) (Region 4 STL).

Using ORD's Community Support Tools in Region 3

The Region 3 RSL, Ron Landy is collaborating with Jim Quackenboss (NERL), Bruce Mintz (NERL) and Rich Paiste (Region 3) on an effort to provide assistance to Dover, Delaware, a [Making a Visible Difference community](#), on the use of ORD community support tools. The effort will explore the use of C-FERST (Community-Focused Exposure and Risk Screening Tool) and other EPA community decision support tools in engaging communities, providing information about their environment, and conducting community assessments.

For more information, contact [Ron Landy](#) (Region 3 RSL).

Urban Contaminant Background Study

Soil samples collected in any large city are going to contain elevated levels of certain contaminants. Known as urban background, these contaminants are often due to human activity, not site releases. The Region 4 STL and RSL have been working with the Region and participating states to develop products that will be used to create background data sets. The project developed a data collection and analysis process that can be consistently applied across the Region. Louisville, Kentucky was the first city to be sampled for this study. Analysis will be available in the coming weeks and additional cities will be sampled. As a result of this study, Region 4 hopes to develop a quality assurance project plan and sampling plan, as well as develop an urban background sample database and statistical analysis report.

For more information, contact [Felicia Barnett](#) (Region 4 STL) or [Tom Baugh](#) (Region 4 RSL).

Investigating Uranium Exposure in the Navajo Nation




OSP's STL in Region 9, Mike Gill, worked with OEI to provide historical aerial photos of the Navajo Nation in northern New Mexico where EPA is investigating gamma exposure from uranium mine sites. The aerial photos, along with EPA's Airborne Spectral Photometric Environmental Collection Technology (ASPECT) aircraft, will help to determine exact locations of past mining activities and target those areas for remediation. For more information, click [here](#).

For more information, contact [Mike Gill](#) (Region 9 STL).

Staff Recognition

Five RARE Project Teams Receive Honor Awards

ORD and regional scientists will receive EPA and/or ORD honor awards for their efforts in the following RARE projects:

-  Region 1 - Developing Exposure Concentrations for Regional Cultural Tribal Risk Assessment
-  Region 1 - Tick-Borne Disease Vector Integrated Pest Management Research
-  Region 5 - Relationship of Airborne Manganese Exposure to Neurobehavioral Health Status of Adults

- Region 7 - Treatment Processes for the Removal of Ammonia from a Small Drinking Water System in Iowa

- Region 9 - Navajo Nation Cleaner Heating Alternatives

Regional Science Liaison Selected to the Lookout Panel

The Region 5 RSL, Carole Braverman, was selected to participate in a “Lookout Panel” sponsored by the Office of the Chief Financial Officer and the Office of the Science Advisor. The group will produce actionable recommendations on emerging environmental and human health issues and technologies for short term action and longer term integration into EPA’s strategic priorities. The Panel will be comprised of 10-15 Skills Marketplace volunteers who will devote approximately 10 percent of their time to the effort.

ORD and Region 5 Scientists Receive Regional Administrators Award for Excellence

On July 23, ORD and Region 5 scientists received a Regional Administrators Award for Excellence for their participation in a RARE project on perfluoroalkyl acids uptake in edible crops. Christopher Lau (NHEERL), Marc Mills (NRMRL), and Kimberly Harris, Gerald Golubski, and Kenneth Gunter of Region 5 examined the potential for edible crops fertilized with biosolids to uptake and bioaccumulate perfluoroalkyl acids.

Did You Know?

A Valuable New Resource for Capturing Information on ORD Regional Collaboration

OSP’s Regional Science Program (RSP) Tracker is an easy-to-use database that allows rapid searches of RARE projects. Users can browse projects by a number of variables including Region, ORD L/C/O, research program and date.

The RSP Tracker is a one-stop tool to communicate project-level information throughout the full lifecycle of the project- from proposal sharing, development, review, and selection through to final product and impact communication. RSLs rely on the RSP Tracker to identify collaborative RARE program research that can be used to inform ORD’s research programs, Board of Scientific Counselors reviews, and other regional and ORD activities. The RSP is currently evaluating Regional Methods projects via the Tracker to help better support methods projects in the future.

In addition to helping OSP and the RSLs, the RARE Tracker could be a great tool to better support science and research in the regions. Use it to learn about the great science and research being conducted by colleagues in your own region. Look across regions and/or ORD programs to find new tools and approaches that might directly help your own work. The Regional Science Program is adding other program activities - including Regional Research Partnerships and STL Projects – along with project connections to ORD Research Programs. When complete, these actions will widen capabilities for searching and highlighting ORD and Regional collaborations across ORD and regional research portfolios.

For questions about any of the highlights in this report, contact Maggie LaVay (202-564-5264).

For more information about ORD’s Regional Science Program, go to <http://intranet.ord.epa.gov/science/regional-science>

